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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,732	01/09/2001	SangKyoon Hyun	062891.0607	7769

7590 05/13/2004

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EXAMINER

MACE, BRAD THOMAS

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 05/13/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

174

Office Action Summary	Application No	Applicant(s)	
	09/757,732	HYUN ET AL.	
	Examiner	Art Unit	
	Brad T. Mace	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/9/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Examiner-Initiated Interview Summary	Application 09/757,732	Applicant(s) HYUN ET AL.	
	Examiner Brad T. Mace	Art Unit 2663	

All Participants:

(1) Brad T. Mace.

(2) Chad C. Walters.

Status of Application: Under Prosecution

(3) _____.

(4) _____.

Date of Interview: 5/6/04

Time: 4:45 pm

Type of Interview:

- ☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☒ No
 If Yes, provide a brief description:

Part I.

Rejection(s) discussed:

Claims discussed:

1-22

Prior art documents discussed:

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

Restriction placed on claims 1-18 from claims 19-22. Attorney has elected claims 1-18 for prosecution.

Part III.

- ☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.
☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

(Examiner/SPE Signature)

Brad Mace
(Applicant/Applicant's Representative Signature – if appropriate)

DETAILED ACTION

Election/Restrictions

1. The inventions are distinct, each from the other because of the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, drawn to a code division multiple access communication system, classified in class 370, subclass 338.
- II. Claims 19-22, drawn to a scalable sectorized code division multiple access base station, classified in class 370, subclass 328.

2. Inventions code division multiple access communication system and scalable sectorized code division multiple access base station are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the communication system has a structure of interconnected components that are represented by their functionality, instead of their internal compositions that yield the particular functionality. The subcombination has separate utility such as being a scalable sectorized communication base station within a communication system.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Chad Walters on 5/7/04 a provisional election was made without traverse to prosecute the invention of a code division multiple access communication system, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

5. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because the effective range of each base station 120 in network 100 is not shown as a circle in Figure 2 as specified on lines 4-5 of pg. 2. Also, lines 9-10 of pg. 2 specify that other locations may be able to communicate with three different base stations, which is not shown in Figure 2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: references 310, 320, and 330 of Figure 3. In Figure 6, no reference is made to 616, 652, 624, 602, 641, 617, 631, 618, 651, and 625. In Figure 7, no reference is made to 712,

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713, 714, 715, 716, 722, 723, 724, 725, 726, 750, 760, and 770. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

8. The disclosure is objected to because of the following informalities: misspelling on line 16 of pg. 3 (sectorised). On line 16 of pg. 3 references A'-C' should be A-C. On line 1 of pg. 4 it should state transceivers 420-424, not 420-425. On line 1 of pg. 4 it specifies channel cards 430-433, but there is no channel card 432 in Figure 4. On line 2 of pg. 4 it specifies analog cards 440-443, but there is no analog card 441 or 442 in Figure 4. On line 2 of pg. 4 it specifies trunk cards 450-453, but there is no trunk card 452 in Figure 4. On lines 15-16 of pg. 10 it specifies WIBS 510-518, but there is no WIBS 511-514 and 516-517 in Figure 5. On line 6 of pg. 11, reference 520 is not WIS. On line 25 of pg. 11, gateway 540 should be gateway 530. On line 1 of pg. 12, gateway 540 should be gateway 530. On line 11 of pg. 12, base station 610 should be base station 600. On line 27 of pg. 12, channel elements should be 612 and 622, not 613 and 623. On line 3 of pg. 13, inteface should be interface. On line 3 and line 6 of pg. 13, Ethernet interface cards 615 and 625 are not shown in Figure 6. On line 14 of pg. 13, splitter 650 is not shown in Figure 6. On line 19 of pg. 14, transceiver 720 is not shown in Figure 7. Appropriate correction is required.

Claim Objections

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9. Claim 1 is objected to because of the following informalities: on line 1 of claim 1, multiplex should be multiple. On line 5 of claim 1, networks should be network. On line 5 of claim 1, networks should be network. On line 10 of claim 1, "network" should be placed after "data". On line 19 of claim 9, a space is needed between "claim" and "1". On line 1 of claim 11, CMDA should be CDMA. On line 5 of claim 11, system should be systems. On line 25 of claim 16, commnuication should be communication.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,721,306 ("Farris et al.").

Regarding claims 1 and 11:

Farris et al. teaches a code division multiple access (CDMA) (col. 7, lines 32-33), wireless (gateway) communication system (col. 5, lines 22-39) comprising: a local area network (LAN) (see Figure 2), a plurality of scalable wireless base stations (col. 6, lines 19-20) coupled to the LAN (where the base stations are scalable in the same way as base modules in that multiple base stations can be added in wireless gateways) and

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where the wireless base stations are coupled to communicate with wireless devices couple within the wireless communications system via an internet protocol (col. 15, lines 51-53), a public switched data (PSDN) gateway coupled to the LAN (col. 15, lines 62-63), a public switched telephone network (PSTN) gateway coupled (indirectly) to the LAN (col. 6, lines 24-28), a public land mobile network (PLMN) gateway coupled (indirectly) to the LAN (where the wireless gateway is itself a PLMN gateway and multiple wireless gateways may exist as indicted by the dotted line on reference 5 of Figure 3). (In addition, it can be inferred that the PSTN and PLMN gateways can be directly coupled to the LAN just as the PSDN gateway, thus setting up an in-building or campus-wide enterprise wireless communication system, instead of a wide area network communication system). Also, Farris et al. teaches that the system utilizes a plurality of antenna systems (col. 6, line 64).

Regarding claims 2 and 12:

Farris et al. teaches that scalable wireless base stations (gateways) include stackable base modules (base stations) coupled to enabling the scalability of the wireless base station (wireless gateway) (col. 6, lines 19-20).

Regarding claims 3 and 13:

Farris et al. teaches that stackable wireless base modules (base stations) include a transceiver coupled to receive and transmit coded communication signals to and from a remote mobile terminal coupled to the system (col. 5, lines 25-28) and to and from the base station (gateway) to the antenna system (see reference 5 and reference 3 of Figure 2).

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Regarding claims 4 and 14:

Farris et al. teaches that the stackable base module (base station) further includes a plurality of channel elements (digital modulator and digital demodulator) coupled to enable the base station (gateway) to handle digital communication signals to and from mobile terminals remotely coupled to the base station (gateway) (col. 6, lines 8-13).

Regarding claims 5 and 15:

Farris et al. teaches that the stackable base module (base station) further includes an Ethernet interface card coupled to enable the stackable base module (base station) to handle internet protocol communication signals (see reference 69 in figure 2, Ethernet interface card since example LAN reference 70 is Ethernet, and col. 15, lines 51-53). Also, classification/groupings of base stations (as with the base modules of Figure 6 in the applicants drawings, references 610 and 620) can be perceived as the base station stated in the application, where the Ethernet interface card enables the grouped base station to communicate over the LAN.

Regarding claim 6:

Farris et al. teaches that the scalable wireless base station (wireless gateway) is capable of having one or more stackable base modules (base stations) (col. 6, lines 19-20).

Regarding claim 7:

Farris et al. teaches that the PSTN gateway includes a plurality of T1 trunks (reference 326 coming out of the data network in Figure 3 are T1 lines, col. 4, lines 24-

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25, in which similar T1 lines are extending out of the data network to other devices, thus it is inferred that there is a plurality of T1 lines extending out of the data network to the PSTN gateway in Figure 1; indicated by the thick black lines in Figures 1 and 3).

Regarding claim 8:

Farris et al. teaches that the PSDN gateway includes a plurality of T1 trunks (see Figure 2, reference 77, where a T1 card indicates a plurality of T1 lines).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,721,306 ("Farris et al.") in view of U.S. Patent No. 5,600,633 ("Jaisingh et al.").

Regarding claims 9 and 16:

Farris et al. discloses substantially all the claimed invention but does not disclose expressly a plurality of combiners coupled to interconnect the plurality of base stations (gateways) to handle forward link communication requests from remote mobile terminals to the (CDMA) system.

Jaisingh et al. discloses a wireless telecommunication base station that utilizes the combiner (see Figure 4) to interconnect the base stations (radio system modules) to

handle forward link communication requests from remote mobile terminals to the system.

A person of ordinary skill in the art would have been motivated to employ Jaisingh et al. in Farris et al. in order to obtain base stations that use combiners so that it will aid in the handling of forward link communication requests from the remote mobile terminals to the system. The suggestion/motivation to employ Jaisingh et al. in Farris et al. would have been to make the combiner provide channel sharing resources for each base module (base station) within the base station (gateway). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Jaisingh et al. with Farris et al. (collectively "Jaisingh et al. – Farris et al.") to obtain the invention as specified in claims 1 and 9 and in claims 11 and 16.

Regarding claims 10 and 17:

Farris et al. discloses substantially all the claimed invention but does not disclose expressly a plurality of splitters coupled to interconnect the plurality of base stations (gateways) to handle reverse link communication requests from remote mobile terminals to the system.

Jaisingh et al. discloses a wireless telecommunication base station that utilizes the splitter (see Figure 4) to interconnect the base stations (radio system modules) to handle reverse link communication requests from remote mobile terminals to the system.

A person of ordinary skill in the art would have been motivated to employ Jaisingh et al. in Farris et al. in order to obtain base stations that use splitters so that it will aid in the handling of reverse link communication requests from the remote mobile terminals to the system. The suggestion/motivation to employ Jaisingh et al. in Farris et al. would have been to make the splitter handle reverse link communication between the base modules (base stations) and mobile terminals communicating with the base station (gateway). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Jaisingh et al. with Farris et al. (collectively "Jaisingh et al. – Farris et al.") to obtain the invention as specified in claims 1 and 10 and in claims 11 and 17.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,721,306 ("Farris et al.") in view of the admitted prior art.

Regarding claim 18:

Farris et al. discloses substantially all the claimed invention but does not disclose expressly that the base station is sectorized.

The admitted prior art discloses that base stations are sectorized (see Figure 3 of application).

A person of ordinary skill in the art would have been motivated to employ the admitted prior art in Farris et al. in order to obtain sectorized base stations. The suggestion/motivation to do so would have been to make a conventional solution for increasing base station capacity as well as the coverage area. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to

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which the invention pertains to combine the admitted prior art with Farris et al. (collectively "admitted prior art – Farris et al.") to obtain the invention as specified in claims 11 and 18.

Conclusion

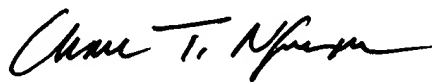
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad T. Mace whose telephone number is (703)-306-5454. The examiner can normally be reached on M-F, with the exception of every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703)-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btm

Brad T. Mace
Examiner
Art Unit 2663



btm

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